



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE  
BOARD OF PATENT APPEALS AND INTERFERENCES

**Applicant:** David Curt Morris **Group Art:** 3745  
**Serial No.:** 09/328,931 **Examiner:** Christopher  
M. Verdier  
**Filing Date:** 06/09/1999 **Docket:** MO1.003  
**Title:** HELICOPTER BLADE ASSEMBLY ADAPTED TO PERMIT RAPID FORWARD FLIGHT

5

Date: 03/13/2003

Board of Patent Appeals and Interferences  
Washington, D.C. 20231

10

Mr. David Curt Morris, ) SUPPLEMENTAL  
Appellant ) APPEAL BRIEF  
vs. ) UNDER 37 CFR 1.191  
United States Patent Office, )  
Appellee. )

RECEIVED

MAR 21 2003  
TECHNOLOGY CENTER R3700

Introduction:

This Supplemental Appeal Brief is submitted in triplicate. This Appeal Brief is filed on June 14, 2002. All claims under Appeal have been twice rejected.

5

Real Party in Interest:

The Real Party in Interest is David Curt Morris, a resident of New York, New York, the inventor of the present invention.

10

Related Appeals and Interferences:

There are no known related Appeals or Interferences known to Appellant.

15 Status of the Claims:

Claim 1 has been amended since it was originally filed, but has been twice rejected in its present form. Claim 2 is as originally filed and has twice been rejected as it stands dependent on claim 1 in its present form. Claims 3 and 4 were 20 added by amendment and have now been twice rejected.

Status of the Amendments:

No amendment after final has been filed.

25 Summary of the Invention:

The present invention is a helicopter blade assembly (Reference No. 10 of Figs. 1A, 1B, 2A, 3A, 3B, 4A, 4B, 5A, 5B, 6A and 6B) for a craft with either one or two blade-sets. The blade assembly is constructed so that the rotation of the 30 blades provides lift during takeoff and landing (Page 5, lines 29-30). During rapid forward flight, however, the blades sweep out the shape of a virtual disk that acts as a lifting body (Page 8, lines 11-12), so that as the virtual disk cuts rapidly through the air it generates lift (Page 5, lines 34-35 37; Page 8, lines 11-12).

ISSUES

5           1. Issues 1-8 remain as stated in the brief filed on  
                 9/27/2002.

         9. Are any new issues raised by Examiner's analysis of  
                 the means plus function clauses of the claims.

GROUPING OF CLAIMS

10          Claims 1-4 form a single group insofar as they all stand  
                 rejected for lack of novelty under 35 USC §102. Claim 4 forms  
                 a subgroup because it is also rejected due to supposed  
                 indefiniteness.

ARGUMENT

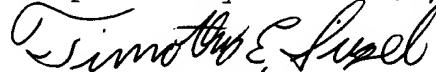
15          The argument section remains the same as in the brief filed  
                 9/27/2003, with the exception of the following addition.

Argument With Respect to Issue 9:

20          Examiner has chosen to give the means-plus-function  
                 clauses of the claims a broad scope. Appellant does not object  
                 to this broad scope, but agrees with it. Accordingly, no new  
                 issues are raised by the Examiner's new grounds of rejection.

25

Respectfully submitted,



Timothy E. Siegel

Attorney for Appellant

Reg. No.: 37,442

1868 Knapps Alley, Suite 206

West Linn, OR 97068-4644

Tel.: 503.650.7411

Fax: 503.650.9886

30

APPENDIX

## CLAIMS UNDER APPEAL

5       1. A helicopter blade assembly for permitting rapid forward flight in a helicopter having separate means for providing a forward impetus, comprising:

substantially vertical mast; and  
a set of rotatable blades which sweep out the shape of a  
10 virtual disk having the properties of a lifting body when they are rapidly rotated by the mast, so that as the virtual disk is pushed translationally through the air it thereby generates lift.

15       2. The assembly of claim 1, further comprising means for controlling the camber of the blades, thereby controlling the shape of the virtual disk.

20       3. The helicopter blade assembly of claim 2,  
wherein said blades have outward tips and said means for controlling the camber of the blades selectively introduce a downward bending near said outward tips of said blades.

25       4. The helicopter blade assembly of claim 1,  
wherein said virtual disk shape swept out has a center and a circular edge and is substantially flat at and near said center and slopes gently downwardly near said circular edge.